

(FILE 'HOME' ENTERED AT 09:52:29 ON 15 JAN 2002)

FILE 'BIOSIS, EMBASE, CAPLUS, MEDLINE' ENTERED AT 09:54:13 ON 15 JAN 2002

L1	481385 S FISH?
L2	2345 S L1 AND MEDAKA
L3	132 S L2 AND (IRIDOPHORE? OR MELANOPHORE? OR XANTHOPHORE? OR LEUCO E WAKAMATSU Y/AU
L4	234 S E3 E WAKAMATSU YUKO/AU
L5	46 S E3
L6	280 S L4 OR L5
L7	0 S L3 AND L6
L8	78 S L4 AND (FISH OR MEDAKA)
L9	41 S L5 AND (FISH OR MEDAKA)
L10	50 DUP REM L8 (28 DUPLICATES REMOVED)
L11	30 DUP REM L9 (11 DUPLICATES REMOVED)

d 111 ti abs ibib 1, 2, 4, 10, 13, 14, 16-21, 23-27, 29

L11 ANSWER 1 OF 30 CAPLUS COPYRIGHT 2002 ACS

TI Transgenic see-through **medaka** transparent throughout life, having pigments genetically removed and germ cell-specific expression of GFP, easy sex determination

AB Transparent see-through **medaka** generated by cross breeding pigment deficient strains, and expressing green fluorescent protein (GFP) specifically in germ cells for easy sex detn., are disclosed. These **medaka** lack brown, black, and yellow pigments, and sex can be easily detd. based on the presence or absence of a DNA marker, SL1, located on Y chromosome. The see-through **medaka** is a vertebrate model with a transparent body in the adult stage, as well as during the embryonic stages, that was generated from a small lab. **fish**, **medaka** (*Oryzias latipes*). In this **fish** model, most of the pigments are genetically removed from the entire body by a combination of recessive alleles at four loci. The main internal organs, namely, heart, spleen, blood vessels, liver, gut, gonads, kidney, brain, spinal cord, lens, air bladder, and gills, in living adult **fish** are visible to the naked eye or with a simple stereoscopic microscope. This **fish** is healthy and fertile. A transgenic see-through **medaka** was produced by using the green fluorescent protein (GFP) gene fused to the regulatory regions of the **medaka** vasa gene, in which germ cell-specific expression of GFP was visualized. The fluorescent tag also efficiently improved visibility of gonadal tissues. The process of oocyte maturation in the ovary was monitored by repeated observations from the outside of the body during one spawning cycle in the same living females of the transgenic see-through stock. The see-through **medaka** will provide an opportunity for noninvasive studies of morphol. and mol. events that occur in internal organs in the later stages of life.

ACCESSION NUMBER:

TITLE:

2001:909973 CAPLUS

Transgenic see-through **medaka** transparent throughout life, having pigments genetically removed and germ cell-specific expression of GFP, easy sex determination

INVENTOR(S):

**Wakamatsu, Yuko**; Sagari, Kenjiro; Tanaka, Minoru; Kinoshita, Masato

PATENT ASSIGNEE(S):

Japan

SOURCE:

Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DOCUMENT TYPE:

Patent

LANGUAGE:

Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001346480	A2	20011218	JP 2000-172375	20000608

L11 ANSWER 2 OF 30 BIOSIS COPYRIGHT 2002 BIOSIS DUPLICATE 1

TI The see-through **medaka**: A **fish** model that is transparent throughout life.

AB The see-through **medaka** is a vertebrate model with a transparent body in the adult stage, as well as during the embryonic stages, that was generated from a small laboratory **fish**, **medaka** (*Oryzias latipes*). In this **fish** model, most of the pigments are genetically removed from the entire body by a combination of recessive alleles at four loci. The main internal organs, namely, heart, spleen, blood vessels, liver, gut, gonads, kidney, brain, spinal cord, lens, air

bladder, and gills, in living adult **fish** are visible to the naked eye or with a simple stereoscopic microscope. This **fish** is healthy and fertile. A transgenic see-through **medaka** was produced by using the green fluorescent protein (GFP) gene fused to the regulatory regions of the **medaka** vasa gene, in which germ cell-specific expression of GFP was visualized. The fluorescent tag also efficiently improved visibility of gonadal tissues. The process of oocyte maturation in the ovary was monitored by repeated observations from the outside of the body during one spawning cycle in the same living females of the transgenic see-through stock. The see-through **medaka** will provide an opportunity for noninvasive studies of morphological and molecular events that occur in internal organs in the later stages of life.

ACCESSION NUMBER: 2001:464679 BIOSIS  
 DOCUMENT NUMBER: PREV200100464679  
 TITLE: The see-through **medaka**: A **fish** model that is transparent throughout life.  
 AUTHOR(S): **Wakamatsu, Yuko (1)**; Pristiyazhnyuk, Sergey; Kinoshita, Masato; Tanaka, Minoru; Ozato, Kenjiro  
 CORPORATE SOURCE: (1) Laboratory of Freshwater Fish Stocks, Bioscience Center, Nagoya University, Furo-cho, Chikusa-ku, Nagoya, 464-8601: wakamatu@bio.nagoya-u.ac.jp Japan  
 SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (August 28, 2001) Vol. 98, No. 18, pp. 10046-10050. print.  
 ISSN: 0027-8424.  
 DOCUMENT TYPE: Article  
 LANGUAGE: English  
 SUMMARY LANGUAGE: English

L11 ANSWER 4 OF 30 BIOSIS COPYRIGHT 2002 BIOSIS DUPLICATE 2  
 TI Fertile and diploid nuclear transplants derived from embryonic cells of a small laboratory **fish**, **medaka** (*Oryzias latipes*).  
 AB Fertile and diploid nuclear transplants were successfully generated by using embryonic cells as donors in a small laboratory **fish**, **medaka** (*Oryzias latipes*). Embryonic cell nuclei from transgenic **fish** carrying the green fluorescent protein (GFP) gene were transplanted into unfertilized eggs enucleated by x-ray irradiation. In this study, 1 out of 588 eggs transplanted in the first experiment and 5 out of 298 eggs transplanted in the second experiment reached the adult stage. All of these nuclear transplants were fertile and diploid, and the natural and GFP markers of the donor nuclei were transmitted to the F1 and F2 offspring in a Mendelian fashion. This systematic study proves the feasibility of generating nuclear transplants by using embryonic cells from **fish** as donors, and it is supported by convincing evidence.

ACCESSION NUMBER: 2001:142230 BIOSIS  
 DOCUMENT NUMBER: PREV200100142230  
 TITLE: Fertile and diploid nuclear transplants derived from embryonic cells of a small laboratory **fish**, **medaka** (*Oryzias latipes*).  
 AUTHOR(S): **Wakamatsu, Yuko (1)**; Ju, Bensheng; Pristiyazhnyuk, Inna; Niwa, Katsutoshi; Ladygina, Tatiana; Kinoshita, Masato; Araki, Kazuo; Ozato, Kenjiro  
 CORPORATE SOURCE: (1) Laboratory of Freshwater Fish Stocks, Bioscience Center, Nagoya University, Furo-cho, Chikusa-ku, Nagoya, 464-8601: wakamatu@bio.nagoya-u.ac.jp Japan  
 SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (January 30, 2001) Vol. 98, No. 3, pp. 1071-1076. print.  
 ISSN: 0027-8424.

DOCUMENT TYPE: Article  
LANGUAGE: English  
SUMMARY LANGUAGE: English

- L11 ANSWER 10 OF 30 CAPLUS COPYRIGHT 2002 ACS  
TI Expression of GFP in nuclear transplants generated by transplantation of embryonic cell nuclei from GFP-transgenic **fish** into nonenucleated eggs of **medaka**, *Oryzias latipes*  
AB To investigate whether foreign genes can be used as genetic markers of donor nuclei in **fish** nuclear transplantation, expression of the GFP gene derived from donor nuclei was examd. in nuclear transplants in **medaka** (*Oryzias latipes*). Embryonic nuclei were obtained from blastula embryos produced by crossing of transgenic **fish** of the wild-type strain heterozygous for the GFP gene with nontransgenic ones or by mutual crossing between transgenic **fish**. The GFP gene was driven by the promoter of the **medaka** elongation factor gene, EF-1.alpha.-A, which is known to induce GFP expression in many tissues except for the muscle in the transgenic **fish**. The nuclei were transplanted into nonenucleated unfertilized eggs of the orange-red strain. Adult nuclear transplants were successfully obtained at the rate of about 2% of the operated eggs. They were triploid and had no reproductive potential. The GFP gene was expressed in embryos, fry, and adults of nuclear transplants in a pattern similar to that in the transgenic **fish**. These results indicate that GFP is useful as a foreign genetic marker of donor nuclei in **fish** nuclear transplantation.

ACCESSION NUMBER: 2000:850294 CAPLUS  
DOCUMENT NUMBER: 134:128817  
TITLE: Expression of GFP in nuclear transplants generated by transplantation of embryonic cell nuclei from GFP-transgenic **fish** into nonenucleated eggs of **medaka**, *Oryzias latipes*  
AUTHOR(S): Niwa, Katsutoshi; Kani, Shuichi; Kinoshita, Masato; Ozato, Kenjiro; **Wakamatsu, Yuko**  
CORPORATE SOURCE: Division of Biological Science, Graduate School of Science, Bioscience Center, Nagoya University, Nagoya, Japan  
SOURCE: Cloning (2000), 2(1), 23-34  
CODEN: CLONFB; ISSN: 1520-4553  
PUBLISHER: Mary Ann Liebert, Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
REFERENCE COUNT: 38  
REFERENCE(S): (2) Blin, N; Nucleic Acids Res 1976, V3, P2303 CAPLUS  
(4) Campbell, K; Nature 1996, V380, P64 CAPLUS  
(5) Cibelli, J; Science 1998, V280, P1256 CAPLUS  
(12) Hamada, S; Histochemistry 1983, V79, P219 CAPLUS  
(17) Kato, Y; Science 1998, V282, P2095 CAPLUS  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L11 ANSWER 13 OF 30 BIOSIS COPYRIGHT 2002 BIOSIS  
TI Transplantation of blastula nuclei to non-enucleated eggs in the **medaka**, *Oryzias latipes*.  
AB Studies of nuclear transplantation were conducted to establish methods for the production of clones of **fish**, using a small laboratory **fish**, **medaka**, *Oryzias latipes*. As the first step of the study, single-blastula nuclei of an inbred strain with the wild-type body color were transplanted into non-enucleated unfertilized eggs of an outbred orange-red strain. Of 845 operated eggs, 45 hatched into fry exhibiting the wild-type body color, one of the donor markers.

Twenty-seven of these nuclear transplants grew to the adult stage and clearly exhibited external secondary sexual characteristics. Fourteen were females and 13 were males. The allozyme analysis of phosphoglucosmutase, measurements of relative DNA content by microfluorometry and chromosome counts consistently indicated that the nuclear transplants were triploids that originated from both the diploid donor nuclei and the haploid recipient pronuclei. In the crossing experiments between the nuclear transplants and the orange-red strain, most of the male nuclear transplants were sterile, whereas one male produced a viable offspring with wild-type body color. All of the female nuclear transplants were sterile. Macroscopic observations of their gonads showed that the testes appeared normal and the ovaries appeared degenerated. These features of the reproductive potential and the morphology of gonads also indicated that the nuclear transplants were triploids. These results demonstrated that a basic technique for nuclear transplantation in **medaka** was established.

ACCESSION NUMBER: 1999:227509 BIOSIS  
DOCUMENT NUMBER: PREV199900227509  
TITLE: Transplantation of blastula nuclei to non-enucleated eggs in the **medaka**, *Oryzias latipes*.  
AUTHOR(S): Niwa, Katsutoshi; Ladygina, Tatiana; Kinoshita, Masato; Ozato, Kenjiro; **Wakamatsu, Yuko (1)**  
CORPORATE SOURCE: (1) Division of Biological Science, Graduate School of Science, Nagoya University, Chikusa-ku, Nagoya, 464-8601 Japan  
SOURCE: Development Growth & Differentiation, (April, 1999) Vol. 41, No. 2, pp. 163-172.  
ISSN: 0012-1592.  
DOCUMENT TYPE: Article  
LANGUAGE: English  
SUMMARY LANGUAGE: English

L11 ANSWER 14 OF 30 BIOSIS COPYRIGHT 2002 BIOSIS DUPLICATE 7  
TI Usefulness of the **medaka** beta-actin promoter  
investigated using a mutant GHFP reporter gene in transgenic **medaka** (*Oryzias latipes*).  
AB The activity of the **medaka** beta-actin promoter as a ubiquitous expression vector in transgenic **medaka** was examined using complementary DNA of the green fluorescent protein (GFP). Plasmid pOBA-GFP contained both the **medaka** beta-actin promoter and cDNA of the wild-type GFP, while pOBA-hGFP contained the **medaka** beta-actin promoter and cDNA of the mutant GFP in which serine was substituted for threonine at position 65 and codon usage was humanized to promote translation in vertebrate cells. The *ApaI*-*SmaI* fragment of both plasmids was microinjected into the nuclei of oocytes or the cytoplasm of embryos at the one-cell stage. The gene expression was detected, using a fluorescent stereomicroscope, from early stages of development to 1 week after hatching. The expression of the wild-type GFP was detected in early embryos, in the yolk sac and in small portions of the muscle and epidermis. This expression pattern was similar to that of the *Escherichia coli* beta-galactosidase reporter gene (*lacZ*), driven by the **medaka** beta-actin promoter, which was examined in our previous studies. The mutant GFP was expressed in early embryos and in many tissues such as the epidermis, blood vessels, muscle, notochord, fin ray, gut, eyes, and yolk sac, and the fluorescence was much stronger than that of the wild-type GFP. Thus, the usefulness of the **medaka** beta-actin promoter as a ubiquitous expression vector was confirmed using the mutant GFP as a reporter gene.

ACCESSION NUMBER: 1998:433249 BIOSIS  
DOCUMENT NUMBER: PREV199800433249

TITLE: Usefulness of the **medaka** beta-actin promoter promoter investigated using a mutant GHFP reporter gene in transgenic **medaka** (*Oryzias latipes*).  
AUTHOR(S): Hamada, Keiko; Tamaki, Kana; Sasado, Takao; Watai, Yoriko; Kani, Shuichi; **Wakamatsu, Yuko**; Ozato, Kenjiro; Kinoshita, Masato; Kohno, Ryuichirou; Takagi, Shigeru; Kimura, Minoru (1)  
CORPORATE SOURCE: (1) Lab. Freshwater Fish Stocks, Biosci. Cent., Nagoya Univ., Nagoya 464-8601 Japan  
SOURCE: Molecular Marine Biology and Biotechnology, (Sept., 1998) Vol. 7, No. 3, pp. 173-180. ISSN: 1053-6426.  
DOCUMENT TYPE: Article  
LANGUAGE: English

L11 ANSWER 16 OF 30 BIOSIS COPYRIGHT 2002 BIOSIS DUPLICATE 8  
TI Transgenic expression of L-gulono-gamma-lactone oxidase in **medaka** (*Oryzias latipes*), a teleost **fish** that lacks this enzyme necessary for L-ascorbic acid biosynthesis.  
AB Transfer of the gene for L-gulono-gamma-lactone oxidase, the missing enzyme in L-ascorbic acid biosynthesis in scurvy-prone animals, into **medaka** (*Oryzias latipes*) was successfully done. The expression plasmid pSVL-GLO, carrying rat liver L-gulono-gamma-lactone oxidase cDNA, was microinjected into the cytoplasm of fertilized eggs during the one-cell stage. Four male F-0 **fish** having the transgene in their germ cells came to maturity, and F-1 progeny derived from one of the F-0 **fish** possessed L-gulono-gamma-lactone oxidase activity, indicating that the transgene was functionally expressed in the **fish**. Genomic Southern blot analysis demonstrated that the transgene existed in both chromosome-integrated and extrachromosomal forms.  
ACCESSION NUMBER: 1996:364514 BIOSIS  
DOCUMENT NUMBER: PREV199699086870  
TITLE: Transgenic expression of L-gulono-gamma-lactone oxidase in **medaka** (*Oryzias latipes*), a teleost **fish** that lacks this enzyme necessary for L-ascorbic acid biosynthesis.  
AUTHOR(S): Toyohara, Haruhiko (1); Nakata, Takahiro; Touhata, Ken; Hashimoto, Hisashi; Kinoshita, Masato; Sakaguchi, Morihiko; Nishikimi, Morimitsu; Yagi, Kunio; **Wakamatsu, Yuko**; Ozato, Kenjiro  
CORPORATE SOURCE: (1) Dep. Fisheries, Fac. Agric., Kyoto Univ., Kyoto 606-01 Japan  
SOURCE: Biochemical and Biophysical Research Communications, (1996) Vol. 223, No. 3, pp. 650-653. ISSN: 0006-291X.  
DOCUMENT TYPE: Article  
LANGUAGE: English

L11 ANSWER 17 OF 30 BIOSIS COPYRIGHT 2002 BIOSIS  
TI Gut formation by a **medaka** (*Oryzias latipes*) cultured cell line transplanted into embryos.  
ACCESSION NUMBER: 1997:229993 BIOSIS  
DOCUMENT NUMBER: PREV199799529196  
TITLE: Gut formation by a **medaka** (*Oryzias latipes*) cultured cell line transplanted into embryos.  
AUTHOR(S): Sasado, Takao; Ozato, Kenjiro; **Wakamatsu, Yuko**  
CORPORATE SOURCE: Graduate Sch. Science, Div. Biological Science, Nagoya Univ., Nagoya 464-01 Japan  
SOURCE: Cell Structure and Function, (1996) Vol. 21, No. 6, pp. 637.

Meeting Info.: Forty-ninth Annual Meeting of the Japan  
Society for Cell Biology Kyoto, Japan October 23-25, 1996  
ISSN: 0386-7196.

DOCUMENT TYPE: Conference; Abstract  
LANGUAGE: English

L11 ANSWER 18 OF 30 BIOSIS COPYRIGHT 2002 BIOSIS

TI A stable line of transgenic **medaka** (*Oryzias latipes*) carrying  
the CAT gene.

AB A stable homozygous line of transgenic **medaka** (*Oryzias latipes*)  
was produced by injecting plasmid DNA containing rainbow trout  
metallothionein A promoter region followed by bacterial acetyltransferase  
gene (rtMT-A-CAT), into the cytoplasm of 111 fertilized eggs. The line  
transmitted active CAT gene to all of the offsprings until sixth  
generation in mendelian fashion. The Southern blot analysis and the  
crossing experiments indicated that the DNA was integrated into the  
chromosome. These results reveal that the **medaka** is a good model  
for basic studies of the production of transgenic **fish**.

ACCESSION NUMBER: 1996:484239 BIOSIS

DOCUMENT NUMBER: PREV199699199495

TITLE: A stable line of transgenic **medaka** (*Oryzias*  
*latipes*) carrying the CAT gene.

AUTHOR(S): Kinoshita, Masato (1); Toyohara, Haruhiko; Sakaguchi,  
Morihiro; Inoue, Koji; Yamashita, Shinya; Satake, Mikio;  
**Wakamatsu, Yuko**; Ozato, Kenjiro

CORPORATE SOURCE: (1) Dep. Fisheries, Fac. Agriculture, Kyoto Univ., Sakyo,  
Kyoto 606-01 Japan

SOURCE: Aquaculture, (1996) Vol. 143, No. 3-4, pp. 267-276.  
ISSN: 0044-8486.

DOCUMENT TYPE: Article  
LANGUAGE: English

L11 ANSWER 19 OF 30 CAPLUS COPYRIGHT 2002 ACS

TI Functional promoter activity of human heat-shock element in transgenic  
**medaka** fry

AB An expression vector carrying the human HSP70 heat-shock element (hHSE)  
followed by the chloramphenicol acetyltransferase (CAT) gene as a reporter  
was microinjected into fertilized eggs of **medaka** during the one  
cell stage. Of 210 eggs injected, 91 viable fry were obtained. By  
polymerase chain reaction anal., transgenesis was detected in 43 of the  
fry. Induced CAT activity was measured after exposure to heat-shock at  
35.degree.C for 6h for 40.degree.C for 110min by using transformed fry  
within 24h of hatching. Significantly higher CAT activity was obsd. in  
the heat-shocked groups, while basal but significant activity was also  
detected in the control group. The results suggest that (i) hHSE is  
useful as an inducible promoter of the **fish** expression vector  
and (ii) the 70kDa heat-shock protein may play a function in the early  
stage of development other than heat-shock response.

ACCESSION NUMBER: 1998:32539 CAPLUS

DOCUMENT NUMBER: 128:136932

TITLE: Functional promoter activity of human heat-shock  
element in transgenic **medaka** fry

AUTHOR(S): Toyohara, Haruhiko; Morita, Takami; Kinoshita, Masato;  
Hashimoto, Hisashi; Sakaguchi, Morihiro; Yokoyama,  
Yoshihiro; Kawai, Fumio; Kanamori, Masao;  
**Wakamatsu, Yuko**; Ozato, Kenjiro

CORPORATE SOURCE: Department of Fisheries, Faculty of Agriculture, Kyoto  
Univ., Kyoto, 606-01, Japan

SOURCE: Kankyo Kagaku Sogo Kenkyusho Nenpo (1996), 15, 49-53  
CODEN: KASND6; ISSN: 0285-5895

PUBLISHER: Kankyo Kagaku Sogo Kenkyusho  
DOCUMENT TYPE: Journal  
LANGUAGE: English

L11 ANSWER 20 OF 30 CAPLUS COPYRIGHT 2002 ACS  
TI Transgenosis and ES cell lines in **medaka**

AB A review with 24 refs.

ACCESSION NUMBER: 1995:835876 CAPLUS

DOCUMENT NUMBER: 123:307327

TITLE: Transgenosis and ES cell lines in **medaka**

AUTHOR(S): Ozato, Kenjiro; **Wakamatsu, Yuko**

CORPORATE SOURCE: Biosci. Cent., Nagoya Univ., Nagoya, 464-01, Japan

SOURCE: Tanpakushitsu Kakusan Koso (1995), 40(14), 2249-56

CODEN: TAKKAJ; ISSN: 0039-9450

DOCUMENT TYPE: Journal; General Review

LANGUAGE: Japanese

L11 ANSWER 21 OF 30 BIOSIS COPYRIGHT 2002 BIOSIS  
TI Developmental genetics of **medaka**.

ACCESSION NUMBER: 1995:77720 BIOSIS

DOCUMENT NUMBER: PREV199598092020

TITLE: Developmental genetics of **medaka**.

AUTHOR(S): Ozato, Kenjiro; **Wakamatsu, Yuko**

CORPORATE SOURCE: Lab. Freshwater Fish Stocks, Biosci. Center, Nagoya univ.,

Furocho, Chikusaku, Nagoya 464-01 Japan

SOURCE: Development Growth & Differentiation, (1994) Vol. 36, No.

5, pp. 437-443.

ISSN: 0012-1592.

DOCUMENT TYPE: General Review

LANGUAGE: English

L11 ANSWER 23 OF 30 BIOSIS COPYRIGHT 2002 BIOSIS DUPLICATE 10  
TI An efficient expression vector for transgenic **medaka**

construction.

AB The transparency and external fertilization of the eggs of **medaka** (*Oryzias latipes*) make them ideally suitable for investigating molecular interactions that occur during vertebrate development. Genetically engineered **medaka** is a potential tool for such studies. It requires several types of suitable expression vectors. To obtain abundant and ubiquitous expression of foreign genes in **medaka** embryos, we have designed an expression vector that contains the proximal promoter and enhancer elements and polyadenylation signal of the **medaka** beta-actin gene. The utility of this "all-**medaka**" expression vector was examined using the *Escherichia coli* lacZ gene as a reporter gene. Most of the injected embryo showed high gene expression, and several embryos showed ubiquitous expression even at six days after injection. Of nine individuals derived from the injected embryos and grown until adult stage, one produced expression-positive F-1 **fish**. The transgene was identified in these F-1 using polymerase chain reaction (PCR). These data revealed that the expression vector based on the expression cassette from the **medaka** beta-actin gene should be useful for making transgenic **medaka**. The cloned gene in this cassette vector is stably transmittable and efficiently expressible.

ACCESSION NUMBER: 1995:107472 BIOSIS

DOCUMENT NUMBER: PREV199598121772

TITLE: An efficient expression vector for transgenic **medaka** construction.

AUTHOR(S): Takagi, Shigeru; Sasado, Takao; Tamiya, Gen; Ozato, Kenjiro; **Wakamatsu, Yuko**; Takeshita, Aya; Kimura, Minoru (1)



CORPORATE SOURCE: (1) Sch. Med., Tokai Univ. Bohseidai, Isehara, Kanagawa  
259-11 Japan  
SOURCE: Molecular Marine Biology and Biotechnology, (1994) Vol. 3,  
No. 4, pp. 192-199.  
ISSN: 1053-6426.  
DOCUMENT TYPE: Article  
LANGUAGE: English

L11 ANSWER 24 OF 30 BIOSIS COPYRIGHT 2002 BIOSIS DUPLICATE 11  
TI Establishment of a pluripotent cell line derived from a **medaka**  
(*Oryzias latipes*) blastula embryo.  
AB A pluripotent cell line, OLES1, was established from a blastula embryo of  
a small freshwater **fish, medaka** (*Oryzias latipes*).  
Cells of this cell line were small and round, and they grew actively and  
stably in culture as dense clusters. They exhibited a positive alkaline  
phosphatase activity upon histochemical staining. When the cells were  
treated with retinoic acid, differentiation into various types of cells,  
including melanocytes, dopa-positive precursors of melanocytes, and cells  
with a molecular marker of skeletal muscles, troponin T, was induced in  
vitro. The present study opens a way to establishing embryonic stem cell  
lines in **fish**.

ACCESSION NUMBER: 1995:104655 BIOSIS  
DOCUMENT NUMBER: PREV199598118955  
TITLE: Establishment of a pluripotent cell line derived from a  
**medaka** (*Oryzias latipes*) blastula embryo.  
AUTHOR(S): **Wakamatsu, Yuko (1)**; Ozato, Kenjiro; Sasado,  
Takao  
CORPORATE SOURCE: (1) Lab. Freshwater Fish Stocks, Bioscience Center, Nagoya  
Univ. Furo-cho, Chikusa-ku, Nagoya 464-01 Japan  
SOURCE: Molecular Marine Biology and Biotechnology, (1994) Vol. 3,  
No. 4, pp. 185-191.  
ISSN: 1053-6426.  
DOCUMENT TYPE: Article  
LANGUAGE: English

L11 ANSWER 25 OF 30 BIOSIS COPYRIGHT 2002 BIOSIS  
TI Generation of germ-line chimeras in **medaka** (*Oryzias latipes*).  
AB As a step toward development of a gene targetting technique in  
**medaka** (*Oryzias latipes*), a small freshwater **fish**,  
germ-line chimeras were generated by transplanting cells from  
blastula-stage embryos of a wild-type strain to the blastoderm of  
recessive color mutants. Sixteen percent of transplanted **fish**  
(F-0) in which albino strains were used as recipients produced F-1  
offspring with the wild-type body color. When F-1 **fish** with the  
wild-type body color were backcrossed with the albino strains, offspring  
with the wild-type and the albino body color segregated with a 1:1 ratio.  
Allozyme analysis of phosphoglucosaminidase showed that the F-1 **fish**  
with the wild-type body color were hybrids between the donor and  
recipient strains.

ACCESSION NUMBER: 1995:124654 BIOSIS  
DOCUMENT NUMBER: PREV199598138954  
TITLE: Generation of germ-line chimeras in **medaka**  
(*Oryzias latipes*).  
AUTHOR(S): **Wakamatsu, Yuko (1)**; Ozato, Kenjiro; Hashimoto,  
Hisashi; Kinoshita, Masato; Sakaguchi, Morihiro; Iwamatsu,  
Takashi; Hyodo-Taguchi, Yasuko; Tomita, Hideo  
CORPORATE SOURCE: (1) Dep. Nat. Environ. Sci., Fac. Integrated Human Studies,  
Kyoto Univ., Kyoto 606-01 Japan  
SOURCE: Molecular Marine Biology and Biotechnology, (1993) Vol. 2,  
No. 6, pp. 325-332.

ISSN: 1053-6426.  
DOCUMENT TYPE: Article  
LANGUAGE: English

L11 ANSWER 26 OF 30 BIOSIS COPYRIGHT 2002 BIOSIS  
TI Pigment cell differentiation in chimeric **Medaka**.  
ACCESSION NUMBER: 1993:378363 BIOSIS  
DOCUMENT NUMBER: PREV199345049788  
TITLE: Pigment cell differentiation in chimeric **Medaka**.  
AUTHOR(S): **Wakamatsu, Yuko**  
CORPORATE SOURCE: Dep. Nat. Environ. Sci., Fac. Integrated Human Studies,  
Kyoto Univ., Kyoto 606 Japan  
SOURCE: Pigment Cell Research, (1993) Vol. 6, No. 1, pp. 55.  
Meeting Info.: 7th Annual Meeting of the Japanese Society  
for Pigment Cell Research  
ISSN: 0893-5785.  
DOCUMENT TYPE: Conference  
LANGUAGE: English

L11 ANSWER 27 OF 30 CAPLUS COPYRIGHT 2002 ACS  
TI Stage-dependent expression of the chicken .delta.-crystallin gene in  
transgenic **fish** embryos  
AB To study the regulation of gene expression of vertebrate crystallin genes,  
the chicken .delta.-crystallin gene was introduced into a small freshwater  
**fish, medaka** (*Oryzias latipes*), which lacks this gene,  
and its expression was examd. immunohistol. at several developmental  
stages before hatching. The gene expression was detected in the central  
fiber cells of the lens at an early stage, showing a stage-dependent  
expression. In non-lens tissues, the expression was barely detectable  
before tissue differentiation. It first became substantial mainly in  
mesodermal tissues and then later in a greater variety of tissues,  
including ectodermal and endodermal ones. Thus, the non-lens expression  
of .delta.-crystallin was also stage-dependent, with the stage being  
dependent on the tissue type. These results from lens and non-lens  
tissues are discussed in relation to tissue differentiation and 2  
categories of .delta.-crystallin expression.

ACCESSION NUMBER: 1989:510261 CAPLUS  
DOCUMENT NUMBER: 111:110261  
TITLE: Stage-dependent expression of the chicken  
.delta.-crystallin gene in transgenic **fish**  
embryos  
AUTHOR(S): Inoue, Koji; Ozato, Kenjiro; Kondoh, Hisato; Iwamatsu,  
Takashi; **Wakamatsu, Yuko**; Fujita, Takao;  
Okada, T. S.  
CORPORATE SOURCE: Yoshida Coll., Kyoto Univ., Kyoto, 606, Japan  
SOURCE: Cell Differ. Dev. (1989), 27(1), 57-68  
CODEN: CDDEE8; ISSN: 0922-3371  
DOCUMENT TYPE: Journal  
LANGUAGE: English

L11 ANSWER 29 OF 30 CAPLUS COPYRIGHT 2002 ACS  
TI Production of transgenic **fish**: introduction and expression of  
chicken .delta.-crystallin gene in **medaka** embryos  
AB To produce a model of transgenic **fish**, recombinant plasmids  
contg. chicken .delta.-crystallin gene were microinjected into the oocyte  
nucleus of a small teleost, **medaka** (*Oryzias latipes*). About 50%  
of the microinjected oocytes developed to 7-day-old embryos. By Southern  
blotting, .delta.-crystallin gene was detected in 4 of 8 embryos, and, by  
Western blotting, .delta.-crystallin polypeptides in 5 of 16. In 1 of 6  
examd. histol., .delta.-crystallin DNA was detected in all the tissues,

and .delta.-crystallin polypeptides were detected in many tissues, including the lens. Thus, the exogenous gene and (or) its products were detected in 10 of 30 embryos examd. This is the 1st report of successful prodn. of transgenic **fish**.

ACCESSION NUMBER:

1987:14193 CAPLUS

DOCUMENT NUMBER:

106:14193

TITLE:

Production of transgenic **fish**: introduction and expression of chicken .delta.-crystallin gene in **medaka** embryos

AUTHOR(S):

Ozato, Kenjiro; Kondoh, Hisato; Inohara, Hiroyuki; Iwamatsu, Takashi; **Wakamatsu, Yuko**; Okada,

T. S.

CORPORATE SOURCE:

Yoshida Coll., Kyoto Univ., Kyoto, 606, Japan

SOURCE:

Cell Differ. (1986), 19(4), 237-44

DOCUMENT TYPE:

Journal

LANGUAGE:

English

=>

d 110 ti abs ibib 1, 3, 4, 7, 11, 15, 17, 18, 19, 20, 21, 23, 25, 30, 31

L10 ANSWER 1 OF 50 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.DUPLICATE 1

TI The see-through **medaka**: A **fish** model that is transparent throughout life.

AB The see-through **medaka** is a vertebrate model with a transparent body in the adult stage, as well as during the embryonic stages, that was generated from a small laboratory **fish**, **medaka** (*Oryzias latipes*). In this **fish** model, most of the pigments are genetically removed from the entire body by a combination of recessive alleles at four loci. The main internal organs, namely, heart, spleen, blood vessels, liver, gut, gonads, kidney, brain, spinal cord, lens, air bladder, and gills, in living adult **fish** are visible to the naked eye or with a simple stereoscopic microscope. This **fish** is healthy and fertile. A transgenic see-through **medaka** was produced by using the green fluorescent protein (GFP) gene fused to the regulatory regions of the **medaka** vasa gene, in which germ cell-specific expression of GFP was visualized. The fluorescent tag also efficiently improved visibility of gonadal tissues. The process of oocyte maturation in the ovary was monitored by repeated observations from the outside of the body during one spawning cycle in the same living females of the transgenic see-through stock. The see-through **medaka** will provide an opportunity for noninvasive studies of morphological and molecular events that occur in internal organs in the later stages of life.

ACCESSION NUMBER: 2001308633 EMBASE

TITLE: The see-through **medaka**: A **fish** model that is transparent throughout life.

AUTHOR: **Wakamatsu Y.**; **Pristyazhnyuk S.**; **Kinoshita M.**; **Tanaka M.**; **Ozato K.**

CORPORATE SOURCE: **Y. Wakamatsu**, Laboratory of Freshwater Fish Stocks, Bioscience Center, Nagoya University, Furo-cho, Chikusa-ku, Nagoya 464-8601, Japan. wakamatu@bio.nagoya-u.ac.jp

SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (28 Aug 2001) 98/18 (10046-10050).

Refs: 21

ISSN: 0027-8424 CODEN: PNASA6

COUNTRY: United States

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 027 Biophysics, Bioengineering and Medical Instrumentation

LANGUAGE: English

SUMMARY LANGUAGE: English

L10 ANSWER 3 OF 50 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.DUPLICATE 3

TI Fertile and diploid nuclear transplants derived from embryonic cells of a small laboratory **fish**, **medaka** (*Oryzias latipes*).

AB Fertile and diploid nuclear transplants were successfully generated by using embryonic cells as donors in a small laboratory **fish**, **medaka** (*Oryzias latipes*). Embryonic cell nuclei from transgenic **fish** carrying the green fluorescent protein (GFP) gene were transplanted into unfertilized eggs enucleated by x-ray irradiation. In this study, 1 out of 588 eggs transplanted in the first experiment and 5 out of 298 eggs transplanted in the second experiment reached the adult stage. All of these nuclear transplants were fertile and diploid, and the natural and GFP markers of the donor nuclei were transmitted to the F(1) and F(2) offspring in a Mendelian fashion. This systematic study proves the feasibility of generating nuclear transplants by using embryonic cells from **fish** as donors, and it is supported by convincing evidence.

ACCESSION NUMBER: 2001053159 EMBASE  
TITLE: Fertile and diploid nuclear transplants derived from  
embryonic cells of a small laboratory **fish**,  
**medaka** (*Oryzias latipes*).  
AUTHOR: **Wakamatsu Y.**; Ju B.; Pristiyaznhyuk I.; Niwa K.;  
Ladygina T.; Kinoshita M.; Araki K.; Ozato K.  
CORPORATE SOURCE: Y. Wakamatsu, Laboratory of Freshwater Fish Stocks,  
Bioscience Center, Nagoya University, Furo-cho, Chikusa-ku,  
Nagoya 464-8601, Japan. wakamatu@bio.nagoya-u.ac.jp  
SOURCE: Proceedings of the National Academy of Sciences of the  
United States of America, (30 Jan 2001) 98/3 (1071-1076).  
Refs: 37  
ISSN: 0027-8424 CODEN: PNASA6  
COUNTRY: United States  
DOCUMENT TYPE: Journal; Article  
FILE SEGMENT: 021 Developmental Biology and Teratology  
LANGUAGE: English  
SUMMARY LANGUAGE: English

L10 ANSWER 4 OF 50 MEDLINE  
TI Nuclear transplantation in **Medaka**.  
ACCESSION NUMBER: 2001137641 MEDLINE  
DOCUMENT NUMBER: 21038366 PubMed ID: 11187804  
TITLE: Nuclear transplantation in **Medaka**.  
AUTHOR: **Wakamatsu Y.**; Niwa K.; Kani S.; Ozato K.  
CORPORATE SOURCE: Laboratory of Freshwater Fish Stocks, Bioscience Center,  
Nagoya University, Furocho, Chikusa-ku, Nagoya 464-8601,  
Japan.. wakamatu@bio.nagoya-u.ac.jp  
SOURCE: TANPAKUSHITSU KAKUSAN KOSO. PROTEIN, NUCLEIC ACID, ENZYME,  
(2000 Dec) 45 (17 Suppl) 2962-6. Ref: 19  
Journal code: Q7D; 0413762. ISSN: 0039-9450.  
PUB. COUNTRY: Japan  
Journal; Article; (JOURNAL ARTICLE)  
General Review; (REVIEW)  
(REVIEW, TUTORIAL)  
LANGUAGE: Japanese  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 200103  
ENTRY DATE: Entered STN: 20010404  
Last Updated on STN: 20010404  
Entered Medline: 20010308

L10 ANSWER 7 OF 50 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.DUPLICATE 6  
TI Expression of murine early embryonic antigens, SSEA-1 and antigenic  
determinant of EMA-1, in embryos and ovarian follicles of a teleost  
**medaka** (*Oryzias latipes*).  
AB Stage-specific embryonic antigen-1 (SSEA-1) and the antigenic determinant  
of monoclonal antibody EMA-1 are expressed in a stage-specific manner in  
mouse early embryos. To study whether these antigens generally exist in  
**fish**, expression of the antigens was examined in embryos, ovarian  
follicles, and adult tissues of a teleost **medaka** (*Oryzias*  
*latipes*), using immunohistochemical techniques. In 1-cell-stage embryos,  
these carbohydrate antigens were found in numerous cytoplasmic granules in  
the blastodisc and the cortical cytoplasm. These granules gradually  
decreased in number as the embryos developed. In 4-cell-stage embryos, the  
antigens appeared on the cleavage planes and were located on the cleavage  
planes within the blastoderm in the following cleavage stages. In  
blastula-stage embryos, the expression was ubiquitously found on the cell  
surface of blastomeres. At the mid- gastrula stage, the antigens were  
restricted to the enveloping layer, yolk syncytial layer, and cortical

cytoplasm, but were rarely found in deep cells that contribute to formation of the embryonic body. In later-stage embryos and adult **fish**, the antigens were located in various tissues. In ovarian follicles, the antigens were found in granules of oocytes and granulosa cells. These observations were basically consistent with those in mice; however, expression in 1-cell-stage embryos and ovarian follicles has not been observed in mice. This unexpected finding suggests that the antigens are produced in granulosa cells and transferred to 1-cell-stage embryos via oocytes, and that the antigens involved in the early developmental process are maternally prepared in teleosts.

ACCESSION NUMBER: 1999199188 EMBASE  
 TITLE: Expression of murine early embryonic antigens, SSEA-1 and antigenic determinant of EMA-1, in embryos and ovarian follicles of a teleost **medaka** (*Oryzias latipes*).  
 AUTHOR: Sasado T.; Kani S.; Washimi K.; Ozato K.; **Wakamatsu Y.**  
 CORPORATE SOURCE: Y. Wakamatsu, Division of Biological Science, Graduate School of Science, Nagoya University, Chikusa-ku, Nagoya 464-8601, Japan. wakamatsu@bio.nagoya-u.ac.jp  
 SOURCE: Development Growth and Differentiation, (1999) 41/3 (293-302).  
 Refs: 49  
 ISSN: 0012-1592 CODEN: DGDFAS  
 COUNTRY: Japan  
 DOCUMENT TYPE: Journal; Article  
 FILE SEGMENT: 021 Developmental Biology and Teratology  
 LANGUAGE: English  
 SUMMARY LANGUAGE: English

L10 ANSWER 11 OF 50 MEDLINE

TI Usefulness of the **medaka** beta-actin promoter investigated using a mutant GFP reporter gene in transgenic **medaka** (*Oryzias latipes*).

AB The activity of the **medaka** beta-actin promoter as a ubiquitous expression vector in transgenic **medaka** was examined using complementary DNA of the green fluorescent protein (GFP). Plasmid pOBA-GFP contained both the **medaka** beta-actin promoter and cDNA of the wild-type GFP, while pOBA-hGFP contained the **medaka** beta-actin promoter and cDNA of the mutant GFP in which serine was substituted for threonine at position 65 and codon usage was humanized to promote translation in vertebrate cells. The *ApaI*-*SmaI* fragment of both plasmids was microinjected into the nuclei of oocytes or the cytoplasm of embryos at the one-cell stage. The gene expression was detected, using a fluorescent stereomicroscope, from early stages of development to 1 week after hatching. The expression of the wild-type GFP was detected in early embryos, in the yolk sac and in small portions of the muscle and epidermis. This expression pattern was similar to that of the *Escherichia coli* beta-galactosidase reporter gene (*lacZ*), driven by the **medaka** beta-actin promoter, which was examined in our previous studies. The mutant GFP was expressed in early embryos and in many tissues such as the epidermis, blood vessels, muscle, notochord, fin ray, gut, eyes, and yolk sac, and the fluorescence was much stronger than that of the wild-type GFP. Thus, the usefulness of the **medaka** beta-actin promoter as a ubiquitous expression vector was confirmed using the mutant GFP as a reporter gene.

ACCESSION NUMBER: 1998368956 MEDLINE  
 DOCUMENT NUMBER: 98368956 PubMed ID: 9701611  
 TITLE: Usefulness of the **medaka** beta-actin promoter investigated using a mutant GFP reporter gene in transgenic **medaka** (*Oryzias latipes*).

AUTHOR: Hamada K; Tamaki K; Sasado T; Watai Y; Kani S;  
**Wakamatsu Y**; Ozato K; Kinoshita M; Kohno R; Takagi  
S; Kimura M  
CORPORATE SOURCE: Division of Biological Science, Graduate School of Science,  
Nagoya University, Nagoya, Japan.  
SOURCE: MOLECULAR MARINE BIOLOGY AND BIOTECHNOLOGY, (1998 Sep) 7  
(3) 173-80.  
Journal code: BU4; 9205135. ISSN: 1053-6426.  
PUB. COUNTRY: United States  
Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 199810  
ENTRY DATE: Entered STN: 19981020  
Last Updated on STN: 19981020  
Entered Medline: 19981007

L10 ANSWER 15 OF 50 MEDLINE  
TI Transgenesis and ES cell lines in **Medaka**.  
ACCESSION NUMBER: 96057004 MEDLINE  
DOCUMENT NUMBER: 96057004 PubMed ID: 8532882  
TITLE: Transgenesis and ES cell lines in **Medaka**.  
AUTHOR: Ozato K; **Wakamatsu Y**  
CORPORATE SOURCE: Laboratory of Freshwater Fish Stocks, Nagoya University,  
Japan.  
SOURCE: TANPAKUSHITSU KAKUSAN KOSO. PROTEIN, NUCLEIC ACID, ENZYME,  
(1995 Oct) 40 (14) 2249-56. Ref: 19  
Journal code: Q7D; 0413762. ISSN: 0039-9450.  
PUB. COUNTRY: Japan  
Journal; Article; (JOURNAL ARTICLE)  
General Review; (REVIEW)  
(REVIEW, TUTORIAL)  
LANGUAGE: Japanese  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 199601  
ENTRY DATE: Entered STN: 19960220  
Last Updated on STN: 19960220  
Entered Medline: 19960130

L10 ANSWER 17 OF 50 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.  
TI Developmental genetics of **medaka**.  
ACCESSION NUMBER: 94368098 EMBASE  
DOCUMENT NUMBER: 1994368098  
TITLE: Developmental genetics of **medaka**.  
AUTHOR: Ozato K.; **Wakamatsu Y**.  
CORPORATE SOURCE: Lab. of Freshwater Fish Stocks, Bioscience Center, Nagoya  
University, Furocho, Chikusaku, Nagoya 464-01, Japan  
SOURCE: Development Growth and Differentiation, (1994) 36/5  
(437-443).  
ISSN: 0012-1592 CODEN: DGDF A5  
COUNTRY: Japan  
DOCUMENT TYPE: Journal; General Review  
FILE SEGMENT: 021 Developmental Biology and Teratology  
022 Human Genetics  
LANGUAGE: English

L10 ANSWER 18 OF 50 MEDLINE  
TI An efficient expression vector for transgenic **medaka**  
construction.  
AB The transparency and external fertilization of the eggs of **medaka**

(*Oryzias latipes*) make them ideally suitable for investigating molecular interactions that occur during vertebrate development. Genetically engineered **medaka** is a potential tool for such studies. It requires several types of suitable expression vectors. To obtain abundant and ubiquitous expression of foreign genes in **medaka** embryos, we have designed an expression vector that contains the proximal promoter and enhancer elements and polyadenylation signal of the **medaka** beta-actin gene. The utility of this "all-**medaka**" expression vector was examined using the *Escherichia coli* lacZ gene as a reporter gene. Most of the injected embryo showed high gene expression, and several embryos showed ubiquitous expression even at six days after injection. Of nine individuals derived from the injected embryos and grown until adult stage, one produced expression-positive F1 **fish**. The transgene was identified in these F1 using polymerase chain reaction (PCR). These data revealed that the expression vector based on the expression cassette from the **medaka** beta-actin gene should be useful for making transgenic **medaka**. The cloned gene in this cassette vector is stably transmittable and efficiently expressible.

ACCESSION NUMBER: 95093527 MEDLINE  
DOCUMENT NUMBER: 95093527 PubMed ID: 8000477  
TITLE: An efficient expression vector for transgenic  
**medaka** construction.  
AUTHOR: Takagi S; Sasado T; Tamiya G; Ozato K; Wakamatsu Y  
; Takeshita A; Kimura M  
CORPORATE SOURCE: NTT Basic Research Laboratories, Kanagawa, Japan.  
SOURCE: MOLECULAR MARINE BIOLOGY AND BIOTECHNOLOGY, (1994 Aug) 3  
(4) 192-9.  
Journal code: BU4; 9205135. ISSN: 1053-6426.  
PUB. COUNTRY: United States  
Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
OTHER SOURCE: GENBANK-S74868  
ENTRY MONTH: 199501  
ENTRY DATE: Entered STN: 19950215  
Last Updated on STN: 19960129  
Entered Medline: 19950126

L10 ANSWER 19 OF 50 MEDLINE  
TI Establishment of a pluripotent cell line derived from a **medaka**  
(*Oryzias latipes*) blastula embryo.  
AB A pluripotent cell line, OLES1, was established from a blastula embryo of  
a small freshwater **fish, medaka** (*Oryzias latipes*).  
Cells of this cell line were small and round, and they grew actively and  
stably in culture as dense clusters. They exhibited a positive alkaline  
phosphatase activity upon histochemical staining. When the cells were  
treated with retinoic acid, differentiation into various types of cells,  
including melanocytes, dopa-positive precursors of melanocytes, and cells  
with a molecular marker of skeletal muscles, troponin T, was induced in  
vitro. The present study opens a way to establishing embryonic stem cell  
lines in **fish**.

ACCESSION NUMBER: 95093526 MEDLINE  
DOCUMENT NUMBER: 95093526 PubMed ID: 8000476  
TITLE: Establishment of a pluripotent cell line derived from a  
**medaka** (*Oryzias latipes*) blastula embryo.  
AUTHOR: Wakamatsu Y; Ozato K; Sasado T  
CORPORATE SOURCE: Laboratory of Freshwater Fish Stocks, Nagoya University,  
Japan.  
SOURCE: MOLECULAR MARINE BIOLOGY AND BIOTECHNOLOGY, (1994 Aug) 3  
(4) 185-91.



JOURNAL code: BU4; 9205135. ISSN: 1053-6426.  
PUB. COUNTRY: United States  
Journal; Article; (JOURNAL ARTICLE)  
LANGUAGE: English  
FILE SEGMENT: Priority Journals  
ENTRY MONTH: 199501  
ENTRY DATE: Entered STN: 19950215  
Last Updated on STN: 19990129  
Entered Medline: 19950126

L10 ANSWER 20 OF 50 BIOSIS COPYRIGHT 2002 BIOSIS  
TI Production of germ line chimeras in **medaka**.

ACCESSION NUMBER: 1993:178345 BIOSIS  
DOCUMENT NUMBER: PREV199344085945

TITLE: Production of germ line chimeras in **medaka**.  
AUTHOR(S): **Wakamatsu, Y. (1)**; Kinoshita, M.; Toyohara, H.;

Sakaguchi, M.; Iwamatsu, T.; Taguchi, Y.; Tomita, H.;  
Ozato, K. (1)

CORPORATE SOURCE: (1) Fac. Lib. Arts Sci., Kyoto Univ., Kyoto Japan  
SOURCE: Zoological Science (Tokyo), (1992) Vol. 9, No. 6, pp. 1209.  
Meeting Info.: Sixty-third Annual Meeting of the Zoological  
Society of Japan Sendai, Japan October 7-9, 1992  
ISSN: 0289-0003.

DOCUMENT TYPE: Conference  
LANGUAGE: English

L10 ANSWER 21 OF 50 BIOSIS COPYRIGHT 2002 BIOSIS DUPLICATE 10  
TI **Medaka** as a model of transgenic **fish**.

AB The **medaka** (*Oryzias latipes*) is an egg-laying freshwater  
**fish**. We describe the **medaka** as a model system of  
transgenic **fish** in terms of biological characteristics,  
manipulation of embryos, gene expression in development, and basic  
research in aquaculture. The **fish** are small (approximately 3 cm  
in length) and have a short generation time (approximately 3 months). The  
eggs are easy to manipulate. A foreign gene (e.g., the chicken delta  
crystallin gene) is transferred and expressed stage-dependently in  
development of **medaka** embryos. Growth hormone genes of  
vertebrates are transferred and expressed and, in some cases, accelerate  
growth of the **fish**. Thus, the **medaka** is one of the  
most promising models of transgenic **fish** for basic research of  
gene expression and aquaculture.

ACCESSION NUMBER: 1995:124630 BIOSIS  
DOCUMENT NUMBER: PREV199598138930

TITLE: **Medaka** as a model of transgenic **fish**.  
AUTHOR(S): Ozato, K. (1); **Wakamatsu, Y.**; Inoue, K.

CORPORATE SOURCE: (1) Dep. Biol., Fac. Liberal Arts Sci., Kyoto Univ.,  
Sakyo-ku, Kyoto 606 Japan

SOURCE: Molecular Marine Biology and Biotechnology, (1992) Vol. 1,  
No. 4-5, pp. 346-354.  
ISSN: 1053-6426.

DOCUMENT TYPE: Article  
LANGUAGE: English

L10 ANSWER 23 OF 50 BIOSIS COPYRIGHT 2002 BIOSIS  
TI TRANSGENIC **FISH** BIOLOGICAL AND TECHNICAL PROBLEMS.

ACCESSION NUMBER: 1989:412624 BIOSIS  
DOCUMENT NUMBER: BR37:68087

TITLE: TRANSGENIC **FISH** BIOLOGICAL AND TECHNICAL  
PROBLEMS.

AUTHOR(S): OZATO K; INOUE K; **WAKAMATSU Y**

CORPORATE SOURCE: BIOL. LAB., YOSHIDA COLL., KYOTO UNIV., KYOTO 606.  
SOURCE: Zool. Sci., (1989) 6 (3), 445-458.  
CODEN: ZOSCEX. ISSN: 0289-0003.  
FILE SEGMENT: BR; OLD  
LANGUAGE: English

L10 ANSWER 25 OF 50 BIOSIS COPYRIGHT 2002 BIOSIS DUPLICATE 12  
TI STAGE-DEPENDENT EXPRESSION OF THE CHICKEN DELTA CRYSTALLIN GENE IN  
TRANSGENIC **FISH** EMBRYOS.  
AB To study the regulation of gene expression of vertebrate crystallin genes,  
the chicken .lambda.-crystallin gene was introduced into a small  
freshwater **fish**, **medaka** (*Oryzias latipes*), which lacks  
this gene, and its expression was examined immunohistologically at several  
developmental stages before hatching. The gene expression was detected in  
the central fiber cells of the lens at an early stage, showing a  
stage-dependent expression. In non-lens tissues, the expression was barely  
detectable before tissue differentiation. It first became substantial  
mainly in mesodermal tissues and then later in a greater variety of  
tissues, including ectodermal and endodermal ones. Thus, the non-lens  
expression of .lambda.-crystallin was also stage-dependent, with the stage  
being dependent on the tissue type. These results from lens and non-lens  
tissue are discussed in relation to tissue differentiation and two  
categories of .lambda.-crystallin expression.

ACCESSION NUMBER: 1989:404133 BIOSIS  
DOCUMENT NUMBER: BA88:73558  
TITLE: STAGE-DEPENDENT EXPRESSION OF THE CHICKEN DELTA CRYSTALLIN  
GENE IN TRANSGENIC **FISH** EMBRYOS.  
AUTHOR(S): INOUE K; OZATO K; KONDOH H; IWAMATSU T; **WAKAMATSU Y**  
; FUJITA T; OKADA T S  
CORPORATE SOURCE: BIOL. LAB., YOSHIDA COLL., KYOTO UNIV., KYOTO 606, JPN.  
SOURCE: CELL DIFFER DEV, (1989) 27 (1), 57-68.  
CODEN: CDDEE8. ISSN: 0922-3371.  
FILE SEGMENT: BA; OLD  
LANGUAGE: English

L10 ANSWER 30 OF 50 BIOSIS COPYRIGHT 2002 BIOSIS  
TI INTRODUCTION OF A FOREIGN GENE INTO **FISH** EMBRYOS.  
ACCESSION NUMBER: 1987:76065 BIOSIS  
DOCUMENT NUMBER: BR32:36258  
TITLE: INTRODUCTION OF A FOREIGN GENE INTO **FISH** EMBRYOS.  
AUTHOR(S): OZATO K; KONDOH H; INOHARA H; IWAMATSU T; **WAKAMATSU**  
**Y**; OKADA T S  
CORPORATE SOURCE: BIOLOGICAL LAB., YOSHIDA COLL., KYOTO UNIV., KYOTO.  
SOURCE: NINETEENTH ANNUAL MEETING OF THE JAPANESE SOCIETY OF  
DEVELOPMENTAL BIOLOGISTS, TSUKUBA, JAPAN, MAY 15-17, 1986.  
DEV GROWTH DIFFER, (1986) 28 (4), 380.  
CODEN: DGDF A5. ISSN: 0012-1592.  
DOCUMENT TYPE: Conference  
FILE SEGMENT: BR; OLD  
LANGUAGE: English

L10 ANSWER 31 OF 50 BIOSIS COPYRIGHT 2002 BIOSIS DUPLICATE 14  
TI PRODUCTION OF TRANSGENIC **FISH** INTRODUCTION AND EXPRESSION OF  
CHICKEN DELTA CRYSTALLIN GENE IN **MEDAKA** ORYZIAS-LATIPES EMBRYOS.  
AB To produce a model of transgenic **fish**, recombinant plasmids  
containing chicken .delta.-crystallin gene were microinjected into the  
oocyte nucleus of a small teleost, **medaka** (*Oryzias latipes*).  
About 50% of the microinjected oocytes developed to 7-day-old embryos. By  
Southern blotting .delta.-crystallin gene was detected in 4 of 8 embryos,  
and, by Western blotting, .delta.-crystallin polypeptides in 5 of 16. In 1

of 6 examined histologically, .delta.-crystallin DNA was detected in all the tissues, and .delta.-crystallin polypeptides, in many of the tissues including the lens. Thus, the exogenous gene and/or its products were detected in 10 of 30 embryos examined. This is the first report of successful production of transgenic **fish**.

ACCESSION NUMBER: 1987:85011 BIOSIS

DOCUMENT NUMBER: BA83:43589

TITLE: PRODUCTION OF TRANSGENIC **FISH** INTRODUCTION AND  
EXPRESSION OF CHICKEN DELTA CRYSTALLIN GENE IN

**MEDAKA** ORYZIAS-LATIPES EMBRYOS.

AUTHOR(S): OZATO K; KONDOH H; INOHARA H; IWAMATSU T; **WAKAMATSU**  
**Y**; OKADA T S

CORPORATE SOURCE: BIOLOGICAL LAB., YOSHIDA COLL., KYOTO UNIV., KYOTO 606.

SOURCE: CELL DIFFER, (1986) 19 (4), 237-244.

CODEN: CLDFAT. ISSN: 0045-6039.

FILE SEGMENT: BA; OLD

LANGUAGE: English

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USPT,PGPB,JPAB,EPAB,DWPI,TDBD	yuko-w.in.	0	<a href="#">L12</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	19 and 110	0	<a href="#">L11</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	kinoshita-m.in.	264	<a href="#">L10</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	tanaka-m.in.	1761	<a href="#">L9</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	ozato-k.in.	2	<a href="#">L8</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	wakamatsu-y.in.	7	<a href="#">L7</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	11 and 14	6	<a href="#">L6</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	13 and 14	71	<a href="#">L5</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	iridophore? or melanophore? or xanthophore? or leucophore?	117	<a href="#">L4</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	11 or 12	126480	<a href="#">L3</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	fish	126472	<a href="#">L2</a>
USPT,PGPB,JPAB,EPAB,DWPI,TDBD	medaka	33	<a href="#">L1</a>